APPENDIX – D

QUALITY ASSURANCE TESTING AND EVALUATION
BY INDEPENDENT EVALUATOR

APPENDIX D1 - DECEMBER 2002

APPENDIX D2 - FEBRUARY 2003

APPENDIX D-1
DECEMBER 2002

Maryland Relay Call Monitoring Results
Fourth Quarter 2002

Purpose of Study

At the request of Telecommunications Access of Maryland, TRS Quality Assurance completed 500 calls through Maryland Relay to measure the quality of service provided by AT&T's relay operators.

Report Summary

Criteria Measured	Results
Number of Calls Evaluated	500
Number of Operators Surveyed	155
Overall Typing Accuracy	77.1%
• Calls with 95% or higher	5.2%
Overall Verbatim	81.7%
• Calls with 95% or higher	18.4%
Overall Typing Speed (words per minute)	58.3 wpm
• Calls with 60 wpm or higher	52%
Calls at 95% Accuracy and 60 wpm	3.2%
Calls at 95% Verbatim and 60 wpm	15.1%
Operators provided ID number	55.2%
Operators asking for Carrier of Choice	7%
Operators providing ASL transliteration	67.6%
Calls with garbling	17
Calls encountering "All CAs Busy"	6

Methodology

Fifty-three scripted conversations were used to survey the operator's ability to relay a variety of business, technical and social calls.

• Voice to TTY	Scripts 1 through 8
• TTY to Voice	Scripts 9 through 41
• TTY to Answering Machine	Scripts 42,43,44,45,50,51,52
• TTY to Voice Processing System	Scripts 46,47,48,49,53

Testing was conducted on thirty-four days between October 12th and December 14, 2002. Calls were placed a various times during the day and evening to reach the largest possible sampling of operators.

A tape recorder was used to capture the voice caller and operator's conversation and a TTY printout was used to capture the TTY caller and relay operators typed conversation.

Each call was evaluated for overall typing accuracy, percent verbatim, typing speed and adherence to relay procedures specified in this document. A spreadsheet with individual call results may be found in a separate file provided with this report.

Overall Typing Accuracy

The standard used to determine typing accuracy is based on the total number of words spoken by the voice caller and any conversation between the operator and the voice person when the TTY user is on the line. It includes all misspelled words, omitted or substituted words and abbreviations used by the operator not introduced by the TTY user. It does not included errors corrected by the operator when "xx" or "xxx" was used to correct an error.

The overall typing accuracy for all operators surveyed was 77.1%. The following is a summary of the accuracy results:

- 0 calls with 100% accuracy
- 26 calls (5.2%)with 99.9% to 95% accuracy
- 166 calls (33.2%) with 94.9% to 85% accuracy
- 129 calls (25.8%) with 84.9% to 75% accuracy
- 92 calls (18.4%) with 74.0% to 65% accuracy
- 48 calls (9.6%) with 64.9% to 55% accuracy
- 20 calls (4%) with 54.9% to 45% accuracy
- 10 calls (2%) with 44.9% to 35% accuracy
- 4 calls (.8%) with 34.9% to 25% accuracy
- 3 calls (.6%) with 34.9% to 15% accuracy
- 2 calls (.4%) with 14.9% to 5 % accuracy

Overall Verbatim

Verbatim includes all information spoken without eliminating, re-phrasing or paraphrasing that information.

Unlike the overall accuracy rating, verbatim does not include an operator's spelling errors with the following exceptions:
- Misspelled words not readily decipherable
- Misspellings that correctly spell a different word

The overall verbatim for the test period was 81.7%. Operators met or exceeded the 95% verbatim requirement on 92 calls (18.4%). The following is a summary of the results:

- 3 calls (.6%) with 100% verbatim
- 89 calls (17.8%)with 99.9% to 95% verbatim
- 174 calls (34.8%) with 94.9% to 85% verbatim
- 95 calls (19%) with 84.9% to 75% verbatim
- 76 calls (15.2%) with 74.0% to 65% verbatim
- 36 calls (7.2%) with 64.9% to 55% verbatim
- 12 calls (2.4%) with 54.9% to 45% verbatim
- 9 calls (1.8%) with 44.9% to 35% verbatim
- 1 call (.2%) with 34.9% to 25% verbatim
- 3 calls (.6%) with 34.9% to 15% verbatim
- 2 calls (.4%) with 14.9% to 5 % verbatim

Overall Typing Speed

Typing speed is determined by timing designated segments on live calls. The timing is based on the start of the voiced segment until the operator stops typing. If the evaluator cannot determine the end of typing, the call cannot be used for this measurement. **It should be noted that this is not a precise measurement.**

Typing Speed is calculated by (1) Total Number of Keystrokes and (2) Total Amount of Time (minutes and seconds). The formula used to calculate words per minute is five (5) keystrokes (four alphanumeric characters plus one space) per "word".

TTY users observed operators using the backspace key to correct typing errors. Theses keystrokes cannot be captured; therefore, those operators' typing speed may be compromised for not following proper procedure for error correction.

Operator typing speed was successfully measured on 252 calls. Fifty-two percent of the operators met or exceeded the 60 words per minute requirement. The following is a summary of measured typing speed:

- 2 calls (.8%) above 100 words per minute
- 2 calls (.8%) with 99.9 to 90 words per minute
- 9 calls (3.6%) with 89.9 to 80 words per minute
- 36 calls (14.3%) with 79.9 to 70 words per minute
- 82 calls (32.5%) with 69.9 to 60 words per minute
- 76 calls (30.2%) with 59.9 to 50 words per minute
- 35 calls (13.9%) with 49.9 to 40 words per minute
- 7 calls (2.8%) with 39.9 to 30 words per minute
- 3 calls (1.1%) with 29.9 to 20 words per minute

Speed and Accuracy Met	Operators met the requirement of 60 words per minute with 95% accuracy on eight out of 252 calls or 3.2%.

Speed and Verbatim Met	Operators met the requirement of 60 words per minute with 95% verbatim on 38 out of 252 calls or 15.1%.

Operators providing ID Number	Operators are required to provide their operator number at the beginning and end of a call to the voice and TTY relay users. This requirement was satisfied on 276 calls. On six voice-originating calls, the operator failed to provide his or her operator number at any point during the call. On one of these calls, the TTY user asked if the voice person was using a TTY. This was not voiced to the caller, instead the operator responded with "THRU RELAY" The remaining 224 calls, operators failed to provide their number at the end of the call. On calls where the voice person stayed on the line for an acknowledgement, most operators signed off with, "Thank you, Bye." Call monitors are required to track operator numbers to make sure the same operator does not handle any script more than once. For this reason AT&T's dial through system could not be used for these calls. Evaluators noted inconsistencies in the operator identification. On TTY originating calls, operators answered the call with "CA xxxx (F) or (M), then asked caller for the number to dial. At the end of the call, (OPR # xxxx (F T) or (M T) . On voicing originating calls, "MD RELAY OPR XXX F T or M T is used for operator identification. Operators did not inform the voice person of their trainee designation.

Carrier of Choice	Operators are required to ask callers for the his or her carrier of choice (COC) for every call if the information is not automatically available through the User Preference Database or offered directly by the inbound caller at the time of the call for any outbound long distance or toll call. Forty-three long distance calls were placed to points outside the state. Operators asked for the caller's COC on three calls or 7% of the time.

Operators providing ASL transliteration	Seven scripts containing ASL gloss were used to test the operator's ability to make grammatically changes to the TTY user's typed message. Operators were rated as "<u>A</u>ttempt" when the operator demonstrated an effort to make grammatically corrections, and "<u>N</u>o" when no changes were made. Operators successfully provided transliteration or attempted to make the TTY user's typed message grammatically correct on 50 out of 74 calls or 67.6% of the time.
Calls with Garbling	TTY users experienced garbling on 17 calls. These calls are identified on the summary spreadsheet with the date shown in bold.
All CAs Busy	Callers reached the "All CA's Busy" message on six calls. These calls are identified on the summary spreadsheet with the script number shown in bold
Relay Explanation	Operators did not ask the voice person if he or she was familiar with relay. If the voice person seemed confused or asked the operator what was going on, the operator offered an explanation. A standard explanation was not always given. Some examples of ad-lib explanations include: • "Have you ever had a relay call Wanda? The other person's deaf. You understand about calling the relay, right?" • " The person on the line may have a hearing or speech loss and we say may because that may not be the case, but they use the Maryland relay to contact you. Anything they want to tell you they will type. I will read it to you and anything you say will be typed back to our customer." • "She's umm, (name) is either hearing or speech impaired so this is her way of communicating. She types and then when she's typing, I voice to you and then what you say back, I type to her." • "The customer calling you has a hearing or speech problem."
Use of Third Person	Many of the call scripts included the standard telephone user speaking to the TTY user in the third person. Evaluators noted 30 calls in which the operator changed third person to first. Every word changed impacts the operator's accuracy and verbatim scores.

Operator Conversations with users	Operators engaged in side conversations with the standard telephone users. The following are examples of these conversations:

Vce: This is David
Opr: This is MD Relay Opr # with a call. How are you David?
Vce: Fine
Opr: It's a wonderful Saturday day morning

Voice: Thank you for calling (Business Name)
Opr: You know, to be honest, I thought you were a recording at first. You know how businesses have the announcement before the options…..

Opr: All right dear. Thank you and have a good weekend.

On another call, the operators asked the voice user several questions while the TTY user was typing:

Opr: How many computers can you have hooked up to the DSL?
Vce: I don't think there's a limit. You mean how many all together?
Opr: Yes
Vce: I'm not sure. I don't think there's a limit as long as you've got a hub and network card.

Vce: ….There's also a small bathroom with a shower off the kitchen …
Opr: Oh, how nice.
Later in the same call
Opr: I never knew there were condos that big. It sounds wonderful…

Vce: … can I have your name again?
TTY: (Gave name)
Opr: That could be a male or female. I'm not really sure. Geez, it's one of those names. They didn't give me any indication. Guess we'll just have to say ok.
Vce: Okay (name)…
Opr: Good thinking!

Vce: Gentle Dental. This is Michelle.
(Opr announced relay, then while the TTY caller was typing:
Opr: How gentle is this dentist?
Vce: Excuse me?
Opr: How gentle is he? Is he gentle?
Vce: Oh yes. Just like the advertisement
Opr: I'm scared to go to the dentist. They have to put me to sleep. Literally

Operator Participation in Calls

The following are examples of operators becoming active participants in a call

Vce: It should be shipped to you in 10 to 15 days if not sooner….
Opr: Is that business days or regular day?

Vce: …. Blue Cross has not paid it yet.
Opr: Okay when you said Blue Cross has not paid it yet, was that a statement or a question?
Vce: Statement
Opr: Okay. I just wanted to make sure.

Vce: I need Alan's last name.
Opr: Her husband's name is Wallis

Vce: Your address is 1624 Hull Street?
Opr typed: YOUR ADDRESS IS 1624 HALL ST Q
TTY: NOT HALL   HULL
Opr`: Oh I'm sorry this was my mistake I mixed that up

TTY: HELLO THIS IS RON MY TWO THINGS ARE NOT WORKING NEED TO KNOW ESTIMATED COST FOR REPAIRS THEY ARE TV AND VCR GA
  The operator voiced the TTY users question, then said to the voice
Opr: How can you possibility tell her if you don't know what's wrong? Well, what would you like to answer?

TTY: GRRR I HAVE TO WORK AT 11…..
Opr: (Laughing) Sorry, I don't mean to laugh, but you'll understand when I read what she had typed. She starts off with Grrrr.
   Later in the same call
Opr: I didn't mean to offend you when I laughed at that. It was just her response was cute and comical.

TTY: HE NEEDS THE TERP SHERRI TO BE THERE …
Opr: I think they are trying to say syrup, but they came up with terp … Sherri. Oh! The interpreter Sherri.

TTY: …..THEY HAVE TO ACCEPT IT ..
Opr: **….** They have to accept it. (operator speaking under her breath added: Yeah? They don't either.)

Vce: Thank you for calling Chadwick's. How may I help you?
Opr typed: HELLO? GA
TTY: IS THIS CHADWICKS Q GA
Opr Typed: YES GA

Another script had the voice caller asking the TTY user how to contact her through relay. Both relay users are still connected. The following are examples of how the operator handled this call.

Vce: Okay. And as soon as something comes up, I'll give you a call. So let me make sure I have this right. I call the relay service first, that's 711 and then I call your number or do they call your number for me?

Opr 1Typed : OKAY AND AS SOON AS SOMETHING COMES UP I'LL GIVE YOU A CALL GA
Opr: They call the number for you. Just give the operator the number when they come on the line.

Opr 2Typed : OK AS SOON AS SOMETHING COMES UP ILL GIVE YOU A CALL LET ME MAKE SURE I HAVE IT RIGHT CALL THE RELAY SERVICE FIRST AT 711 GA
Opr: First the relay at 711 and ask the relay operator for my home number.

Opr 3Typed : OK AND AS SOON AS SOME THING COMES UP I LL GIVVE YOU A CALL OK GA
Opr: You call 711 and then you give them my number and then they will call me.

Opr 4Typed : OK AS SOON AS SOMETHING COMES UP I WILL GIVE YOU A CALL OK GA TO SK
Opr: You dial 711 first
Vce: Ok. I call the relay service first. 711.
Opr: The operator comes on and you give the number to them.
Vce: Alright? Then I call the number?
Opr: Yep
Vce: All right. Thanks a lot.

| **Answering Machine Calls** | Operators were able to process answering machine calls with few problems. The answering machine message was typed to the TTY caller followed in most cases with "Would you like to leave a message?" Operators kept the caller informed of the call status by using macro keys (HOLD WHILE I LV MSG) and (MESSAGE HAS BEEN LEFT). |

Only one operator failed to relay the answering machine message to the caller.

Opr: (RECORDED MESSAGE) DO YOU WANT TO LEAVE A MESSAGE GA
TTY: OPR IS THAT MARIE S ANS MACHINE Q I WANT TO MAKE SURE I LEFT TO RIGHT PH NBR GA
Opr: O C UYES IT IS ILL CALL BACK TO MAKE SURE FOR YOU SO THAT YOU WILL BE CERTAIN OK GA
TTY: YES PLS GA
OPR: …DIALING .. YES ITS MARIE GA

| **Voice Retrieval** | TTY callers experienced long waits while some operators attempted to dial into voice processing systems. Other operators were not sure how to process the call and would tell the caller they could not access the system. Here are three examples: |

TTY: ACCESS NBR FOR VOICE MAIL 410 988 9997 PRESS * MAILBOX NBR (NBR) PASSWORD (NBR) # (POUND) GA

Opr 1: THANK YOU DIALING … RINGING 1… 2… 3… 4… 5….
              (LONG PAUSE)
TTY: HELLO Q GA
Opr 1: IT WIVD NOT ACCEPT (PASSWORD) GA
TTY: DID U PRESS * AFTER THE LINE ANSWERED Q GA
Opr1: YES I DID # GA
TTY: DID YOU PRESS * AFTER THE LINE ANSWERED Q GA
Opr1: YES GA THANK YOU DIALING … DO YOU WANT TO DAIL 410 988 OR (MAILBOX NBR) GA
TTY: YOU FIRST DIAL ACCESS NBR 410 988 9997 THEN PRESS * THEN THE MAILBOX NBR IS (NBR) GA
Opr1: THAT IS WHAT WAS WRONG THE NUMBER CAME OVER TO ME DIALING (MAILBOX) FIRST THANK YOU DIALING…..

Opr2: THANK YOU DIALING … DIALING … RINGING 1… 2… 3.. 4… (ONE MOMENT PLS) (OPR HERE HOW DO I CHECK THE VOICE MAIL WHEN IT COMES ON Q GA)
TTY: RELAY THE MSGS THAT WAS LEFT GA
Opr2: (OPR HERE AN ANSWERING MACHINE CAME ON DO YOU WANT TO CALL (MAILBOX #) GA
TTY: (REPEATED INSTRUCTIONS)

TTY: PLS CK MY VOICE MAIL 410 988 9997 NBR (MAILBOX NBR) PASSWORD (NBR) GA

Opr3: THANK YOU .. DIALING .. THANK YOU .. DIALING .. THANK YOU .. DIALING ..

TTY: HELLO Q WHAT IS GOING ON Q GA

Opr3: IT WASS RINGING AND THEM BUSY … REDAILED .. THANK YOU .. DIALED .. THANK YOU … DIALING .. FINALLY .. ITS TELL MY (PASSWORD) IS NOT A VALID NUMBER GA

TTY: OK I WILL FIGURE IT OUT THANKS BYE BYE SK

OPR3: I AM SORRY I DID IT TWICE I DON'T KNOW WHAT COULD BE WRONG I DIALED (ACCESS NBR) AND PERHAPS I SHOULD HIT STAR FIRST… COULD THAT BE IT Q GA

TTY: WHO KNOWS DIDN'T THE RECORDING GIVE YOU INSTRUCTIONS Q GA

Opr3: IT SAID IF YOU ARE AT YOUR MAILBOX PHON HIT STAR .. I CAN TRY THAT .. ALL THESE SERVICES ARE DIFFER SOMEWHAT I ASSUMED BECAUSE THE TWO NUMBERS DIFFERED WE ONLY HIT THE CODE.. I YOU HAE A MINUTE I CAN TRY THAT FOR YOU Q GA

TTY: OK PLS FOLLOW INSTRUCTIONS GA

Opr3: THANK YOU .. DIALING… SAME THING SAYS IT IS NOT A VALID MAILBOX NUMBER SORRY

**APPENDIX D-2
FEBRUARY 2003**

Maryland Relay Call Monitoring Results
First Quarter 2003

Purpose of Study

At the request of Telecommunications Access of Maryland, TRS Quality Assurance completed 502 calls through Maryland Relay to measure the quality of service provided by AT&T's relay operators.

Report Summary

Criteria Measured	Current Results	Previous Results
Number of Calls Evaluated	502	
Number of Operators Surveyed	165	155
Overall Typing Accuracy	83%	77.1%
• Calls with 95% or higher	12.4%	5.2%
Overall Verbatim	87.9%	81.7%
• Calls with 95% or higher	32.9%	18.4%
Overall Typing Speed (words per minute)	61.2 wpm	58.3wpm
• Calls with 60 wpm or higher	59.2%	52%
Calls at 95% Accuracy and 60 wpm	9.0%	3.2%
Calls at 95% Verbatim and 60 wpm	23.2%	15.1%
Operators provided ID number	74.3%	55.2%
Operators providing ASL transliteration	76.8%	67.6%
Calls with garbling	21	17
Calls encountering "All Operators Busy"	25	6

Methodology

Fifty-one scripted conversations were used to survey the operator's ability to relay a variety of business, technical and social calls.

• Voice to TTY	Scripts 1 through 9
• TTY to Voice	Scripts 10 through 43
• TTY to Answering Machine	Scripts 44,45,46,47
• TTY to Voice Processing System	Scripts 48,49,50,51

Testing was conducted on thirty-three days between February 10th and March 15, 2003. Calls were placed a various times during the day and evening to reach the largest possible sampling of operators.

A tape recorder was used to capture the voice caller and operator's conversation and a TTY printout was used to capture the TTY caller and relay operators typed conversation.

Typing Accuracy

The overall typing accuracy for all operators surveyed was 83%. This represents an improvement over the previous test period of 7.7%.

The majority of operators asked for the spelling of all proper names, including common names such as Sue, Susan and Karen. If the operator asked the voice person to spell a name during call and did not indicate this to the TTY caller, (D I A G L E or (ASKING FOR SPELLING), the name was scored as an accuracy error. If the operator verified the spelling, i.e. is that Cathy with a "C", no error was charged. The following is a summary of the accuracy results:

- 5 calls (1%) with 100% accuracy
- 57 calls (11.3%)with 99.9% to 95% accuracy
- 206 calls (41%) with 94.9% to 85% accuracy
- 145 calls (28.9%) with 84.9% to 75% accuracy
- 44 calls (8.8%) with 74.0% to 65% accuracy
- 26 calls (5.2%) with 64.9% to 55% accuracy
- 9 calls (1.8%) with 54.9% to 45% accuracy
- 4 calls (.8%) with 44.9% to 35% accuracy
- 3 calls (.6%) with 34.9% to 25% accuracy
- 2 calls (.4%) with 34.9% to 15% accuracy
- 1 call (.2%) with 5% to 0 % accuracy

Overall Verbatim

The overall verbatim for the test period was 87.9%. This represents an improvement over the previous test period of 7.6% Operators met or exceeded the 95% verbatim requirement on 165 calls (32.9%). The following is a summary of the results:

- 35 calls (7%) with 100% verbatim
- 130 calls (25.9%)with 99.9% to 95% verbatim
- 199 calls (39.6%) with 94.9% to 85% verbatim
- 78 calls (15.5%) with 84.9% to 75% verbatim
- 34 calls (6.8%) with 74.0% to 65% verbatim
- 15 calls (3%) with 64.9% to 55% verbatim
- 3 calls (.6%) with 54.9% to 45% verbatim
- 2 calls (.4%) with 44.9% to 35% verbatim
- 3 calls (.6%) with 34.9% to 25% verbatim
- 2 calls (.4%) with 34.9% to 15% verbatim
- 1 call (.2%) with 4.9% to 0 % verbatim

Overall Typing Speed

Typing speed is determined by timing designated segments on live calls. The timing is based on the start of the voiced segment until the operator stops typing. If the evaluator cannot determine the end of typing, the call cannot be used for this measurement. Typing speed was measured on 267 out of a possible 417 calls. The average words per minute (wpm) was 61.2. Operators met or exceeded the 60 wpm on 158 calls (59.2%). The following is a summary of measured typing speed:

- 2 calls (.8%) above 100 words per minute
- 3 calls (1.1%) with 99.9 to 90 words per minute
- 17 calls (6.4%) with 89.9 to 80 words per minute
- 46 calls (17.2%) with 79.9 to 70 words per minute
- 90 calls (33.7%) with 69.9 to 60 words per minute
- 70 calls (26.2%) with 59.9 to 50 words per minute
- 29 calls (10.9%) with 49.9 to 40 words per minute
- 10 calls (3.7%) with 39.9 to 30 words per minute

Speed and Accuracy Met

Operators met the requirement of 60 words per minute with 95% accuracy on 24 out of 267 calls or 9% of the calls.

Speed and Verbatim Met

Operators met the requirement of 60 words per minute with 95% verbatim on 62 out of 267 calls or 23.2% of the calls.

Operators providing ID Number

Operators are required to provide their operator number at the beginning and end of a call to the voice and TTY relay users. This requirement was satisfied on 374 calls.
- No operator number provided to either person on 1 call
- No operator number to TTY on 4 calls
- No operator number at the beginning to the TTY on 5 calls
- No operator number at the beginning to TTY and end to Voice on 1 call
- No operator number to TTY and at the end of the call to voice on 1 call
- No operator number at the end of the call to the TTY on 46 calls
- No operator number at the end of the call to the voice on 63 calls
- No operator number at the end of the call to either person on 7 calls

There appears to be no standard announcement to the TTY user on voice to TTY calls. The following announcements were given on this type of call:

- MD RELAY , OPR XXXX TF (55 calls)
- MARYLAND RELAY, CA XXXX (9 calls)
- OPR XXXX TF (12 calls)
- MD RELAY, T OPR XXXX F (4 calls)

Operators Identified as "Trainee"

Operators in training are required to identify themselves to both parties. Four hundred fifty-five calls were identified with a "T" associated with the operator number. Twenty-five calls (11 operators) identified themselves to the voice person as a trainee.

Operators Providing ASL Transliteration

Twenty-four scripts (228 calls) provided operators with the opportunity to make grammatical changes to the TTY users typed messages. Operators made all or most of the changes on 175 calls (76.8%). Operators made no grammatical changes on 29 calls and inappropriate changes on 24 calls. Some examples of inappropriate changes include:

NOW IT IS WITH MY EARTHLINK   WHEN I TRY TO OPEN ATTACHMENT I SEE MESSAGE   OE HAS REMOVED ACCESS TO UNSAFE ATTACHMENT IN YOUR MAIL   ANY IDEAS GA

- Five out of 10 operators did not voice "OE". Four operators omitted "OE", one changed "OE" to "it". The voice person asked three operators if they were reading exactly what was typed, and all three assured him they had.

GREAT   PLS CHECK TO SEE YOU HAVE THE STOCK GA

- Operator voiced: "Great. Please check just to make sure you have it there so I can come and get it."

I DID NOT KNOW THAT THEY HAVE TO BE NOTIFY WITHIN 48 HRS NEXT   TIME I WILL NOT DO IT AGAIN WHEN I CALL TO CANCEL WITHIN 24 HRS IT HAS TO BE 48 HRS TO CANCEL BECAUSE OF TERP   THANK YOU SO MUCH FOR SENDING ME THE LETTER GA

- Operator voiced: I did not know that they have to notify within 48 hours. I won't do it again. Thank you so much for sending me the letter.

- Operator voiced: I did not know that they had to be notify within 48 hours. Next time I will not do it again. *When I called to cancel within 24 hours that's when they told me of the 48 hours because of the interpreter.* Thank you so much for sending me the letter.

- One operator voiced this message as: " Yes. *I did call the lady at Edgewood office and told her to cancel the appointment for this morning and she say that was okay. She must have forgot*."

PLS REDIAL AND LV MESSAGE   HI JOHN M HERE I TRIED TO IM YOU BUT NO LUCK PLS CALL ME BEFORE 9 TONIGHT   THANKS BYE GA

- This was a TTY to voice answering machine. Four operators failed to voice "IM" and voiced as "I tried to but no luck."

OK FINE THANKS I WRITE THE NOTE TO TEACHER DO YOU WANT ME TO GIVE YOU THE MONEY FOR SUPPER Q GA

- Operator omitted the first sentence and only voiced "Do you want me to give you the money for supper?"

Calls with Garbling

TTY users experienced garbling on 21 calls. Four of these calls did not show garbling on the TTY printout, however the operator asked the TTY user to repeat information that was garbled on the operator's screen. Most of the garbling was a few characters at the start of the call or the start of a typed segment. Ultratec 4425s set to turbo code were used for all calls. One user noted that the operator's typing was noticeably slower on Voice to TTY calls. It appeared that a Baudot handshake was made on these calls and turbo was established on TTY to Voice calls.

Calls with garbling are identified on the **MD4RSLTS.XLS** file with a bold date.

"All Operators Busy"

Caller encountered "All Operators Busy or "Due to an extreme weather condition in the Northeast all operators are busy" on 25 calls.

Calls with busy encountered are identified on the **MD4RSLTS.XLS** file with a bold italicized date.

Voicing: Pace and Inflection	Operators were evaluated on their voicing skills including appropriate pace. Operators were rated as demonstrating appropriate voicing skills on 419 out of 462 calls rated (90.7%).

- 6 calls were rated as slow (S) or inappropriate (I) because the operator waited for the TTY user to type an entire, long message before voicing to the hearing person. One voice person waited 96 seconds before the operator began voicing while another operator waited 46 seconds before relaying the message. No status was given to the voice person, i.e. "One moment please. " Or "still typing."

- 27 calls were rated as run-on (R) because the operator voiced an entire segment as one long run-on sentence with no inflection.

- 10 calls were rated as choppy (C) or awkward because the operator did not pause at the end of sentences or began voicing too soon, before a complete thought was typed, making it difficult for the voice person to follow what the TTY user was saying.

Several TTY to Voice calls were answered with, "Hello?" The TTY user responded with "CHRIS Q IT IS ME CHERYL" or "JOANNE Q THIS IS KIRSTEN" or "HI MARC Q THIS IS JENNIFER COOK"   Most operators voiced Chris? , Joanne? and Marc?" as a statement rather than a question.

General Comments	

- On three TTY to Voice scripts, the voice person was not familiar with relay. On those calls where the operator asked if the person was familiar with relay, the standard relay explanation was given. Two operators engaged in a side conversation with the voice person during the call when they realized the voice person did not understand relay.

- A common TTY abbreviation for interpreter, "terp", was voiced as "terp" to the voice person.

- When the voice person spoke in third person, most operators typed in third person rather than changing to first person. This is an improvement over the first testing.

- Operators sometimes got involved in the conversation by responding to a question directed to the other person instead of relaying the question.

Continued on next page

- On script 15, the voice person verifies an e-mail address given by the TTY caller. Instead of relaying what the voice person said to the TTY, 4 operators confirmed that the address was correct.

- Operator asked the voice person to spell "Weymouth" but typed "Wetihmust" to the TTY caller. The TTY replied, "IS THIS DR WEYMOUTHS OFC Q GA", the operator did not voice the question, but replied with "YES GA"

- The name "Fallon" was used twice in script 17. The operator asked the voice person for the correct spelling, but typed it as "Salen". The second time the operator typed "Salen" for "Fallon", the TTY asked for clarification, "WHAT IS SALEN Q DO YOU MEAN FALLON Q ". The operator did not relay this question but responded with "YES GA"

- On script 16, the voice person is responding to several questions asked by the TTY caller. Part of the responds was. "Now she also asked about contacting the interpreter?" Three operators failed to type this to the TTY callers and responded to the voice person's question themselves.

- Several operators interjected their personal comments and questions during calls.

    o One operator become involved throughout the call:
        - Well, OE is outlook express. (Opr: Oh, I didn't know that. Hmmm)
        - OE HAS REMOVED ACCESS TO UNSAFE ATTACHMENTS IN YOU MAIL (Opr: I wonder what it meant by unsafe? Does that mean a virus?)
        - Is your virus protection software up to date? (Opr: Good question!)

- TTY: DO YOU SELL THOSE MATTRESS Q GA Vce: Yes we do Opr: And how much are they? Go ahead

- On script 12, the voice person asked "I have a question before I hang up, then I'll sign off. I wanted to ask how do I call the relay when I want to talk to Mrs. Randolph if I can't get through. For instance, if I'm calling to confirm an appointment, I have trouble getting through the relay unless one of the children answers the phone." The operator typed "I AVE A QUESTION BEFORE I HANG UP AND THEN ILL SIGN OFF I WANTED TO ASK HOW TO DO I CAL LTEH RLELAY (HUNG UP) GA OR SK